Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Petition of Bell Atlantic Corporation for Relief from Barriers to Deployment of Advanced Telecommunications Services	CC Docket No. 98-11
Petition of US WEST Communications, Inc. for Relief from Barriers to Deployment of Advanced Telecommunications Services	CC Docket No. 98-26
Petition of Ameritech Corporation to Remove Barriers to Investment in Advanced Telecommunications Services	CC Docket No. 98-32

COMMENTS OF COVAD COMMUNICATIONS COMPANY

Thomas M. Koutsky
Assistant General Counsel
Covad Communications Company
3560 Bassett Street
Santa Clara, CA 95054

April 6, 1998

SUMMARY

Covad Communications Company ("Covad") is a Silicon Valley-based, start-up CLEC whose goal is make advanced telecommunications services available to homes, businesses, schools and libraries throughout the United States by deploying Digital Subscriber Line ("DSL") technology over the existing local facilities of incumbent LECs. Covad believes that the goals of Section 706 can best be achieved through a *competitive* market for advanced telecommunications services—a market free of the "take-it-or-leave-it" ISDN tariffs of the past but one in which competing service providers offer ever-increasing bandwidth to consumers. Thus, the Commission should not consider granting the relief requested until Petitioners have demonstrated that they have faithfully and fully implemented the relevant provisions of the 1996 Act that would allow CLECs like Covad to offer broadband telecommunications services on a competitive basis.

Covad believes that some specific steps would greatly enhance the deployment of advanced telecommunications services in a competitive environment. The Commission should: (1) ensure actual, nondiscriminatory access to unbundled local loops that support xDSL services (and relevant OSS) at just and reasonable rates, terms and conditions; (2) require reform of ILEC physical collocation practices; and (3) remove all artificial restrictions on the functionality of equipment that may be collocated in ILEC central offices. Since Petitioners, to varying degrees, have not taken all of these steps, responsibility for delay in the deployment of advanced telecommunications services must also be directed at the boardrooms and legal departments of the incumbent LECs themselves, and not at the fundamental structure of the 1996 Act.

TABLE OF CONTENTS

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Petition of Bell Atlantic Corporation for Relief from Barriers to Deployment of Advanced Telecommunications Services	CC Docket No. 98-11
Petition of US WEST Communications, Inc. for Relief from Barriers to Deployment of Advanced Telecommunications Services	CC Docket No. 98-26
Petition of Ameritech Corporation to Remove Barriers to Investment in Advanced Telecommunications Services	CC Docket No. 98-32

COMMENTS OF COVAD COMMUNICATIONS COMPANY

Three Regional Bell Operating Companies—Bell Atlantic Corporation, U S WEST Communications, Inc., and Ameritech Corporation—have filed Petitions under Section 706 of the Telecommunications Act of 1996 for "relief" or "removal" of ostensible regulatory barriers to their deployment of advanced telecommunications services. Cumulatively, Petitioners have requested a wide range of de-regulation or forbearance, including exemptions from the provisions in the Communications Act that restrict their provision of interLATA data services and a cornucopia of pricing, unbundling and separations restrictions.[1]

[1] Bell Atlantic has requested generalized forbearance from "newer high-speed broadband services that operate a speeds greater than ISDN, including all xDSL services." Petition of Bell Atlantic for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-11, at 3 (filed Jan. 26, 1998) ("BA Petition"). U S WEST has asked for similar relief. Petition of U S WEST Communications, Inc. for Relief from Barriers to Deployment of Advanced Telecommunications Services,

Covad Communications Company ("Covad") supports the Congressional policy behind Section 706 of the 1996 Act. Indeed, Covad's sole goal is to make the vision of Section 706 a reality by making advanced telecommunications services available to homes, businesses, schools and libraries throughout the United States by deploying Digital Subscriber Line ("DSL") technology over the existing local facilities of incumbent LECs. These Petitions—and the Commission's upcoming proceeding required by Section 706(b) of the 1996 Act—present a unique opportunity for the Commission to examine the various obstacles that stand in the way of the deployment of these advanced services in a *competitive* environment. Indeed, Section 706(a) specifically mentions "measures that promote competition in the local telecommunications market" as an appropriate regulatory tool. Therefore, Section 706 is not only about forbearance or "regulatory relief"—it is a clarion call for more competition in telecommunications markets.[2]

As a general matter, Covad believes that no new "regulatory deals" should be cut with Petitioner (or other ILECs) for broadband services until Petitioners demonstrate that they have faithfully and fully implemented the relevant provisions of the 1996 Act that allow CLECs like Covad to offer broadband telecommunications services on a competitive basis. Sections 251, 252, 271 and 272 remain the law of the land. In particular, Covad's experience with Ameritech, Bell Atlantic and U S WEST regarding

---

CC Docket No. 98-26 at 4 (filed Feb. 25, 1998) ("US WEST Petition"). Ameritech has asked that the Commission to create a broadband affiliate that would be subject to certain limited structural separation requirements but which would be exempted from Section 251 of the 1996 Act and dominant carrier regulation. Petition of Ameritech Corporation to Remove Barriers to Investment in Advanced Telecommunications Capability, CC Docket No. 98-32 at 2-4, 14-27 (filed March 5, 1998) ("Ameritech Petition").

[2] Covad takes no position as to whether Section 706(a) of the 1996 Act presents a legal mandate or authority for regulatory forbearance in addition to Section 10 of the Act. However, Covad points out that if Section 706(a) is a legal mandate or source of authority for "regulatory forbearance", it must also be a legal mandate or source of authority for the Commission to implement "measures that promote competition in

physical collocation practices and availability of DSL-compatible unbundled loops in those regions reveals ILECs have failed to comply with and fully implement the 1996 Act, especially as it relates to broadband services.[3]

Therefore, in this proceeding, Covad urges that the Commission examine the conduct and policies of these Petitioners in their dealings with CLECs like Covad who seek to provide broadband digital telecommunications services on a competitive basis. Covad believes that some specific steps would greatly enhance the deployment of advanced telecommunications services in a competitive environment. The Commission should: (1) ensure actual, nondiscriminatory access to unbundled local loops that support xDSL services (and relevant OSS) at just and reasonable rates, terms and conditions; (2) require reform of ILEC physical collocation practices; and (3) remove all artificial restrictions on the functionality of equipment that may be collocated in ILEC central offices. Covad believes that if ILECs faithfully and fully implement such steps, competitive providers of advanced services will emerge in all parts of the country.

Unfortunately, none of the Petitioners have taken all of these steps. As a result, responsibility for delay in the deployment of advanced telecommunications services must be directed at the boardrooms and legal departments of the incumbent LECs themselves, and not at the fundamental structure of the 1996 Act.

---

the local telecommunications market" and to accelerate advanced services deployment "by promoting competition . . . . " 47 U.S.C. § 157nt(a)-(b).

[3] For example, the physical collocation practices of numerous ILECs violate the plain language of section 251(c)(6): these ILECs unilaterally declare that many central offices lack space for physical collocation without first meeting their burden of proving their assertions to the relevant state commission.

I. COVAD, DSL TECHNOLOGY AND THE NATURE OF COMPETITION FOR BROADBAND, DIGITAL TELECOMMUNICATIONS SERVICES

Covad Communications Company ("Covad") is a Silicon Valley-based, start-up competitive local exchange carrier that is focused upon deploying packet-switched, high-bandwidth DSL-based telecommunications services[4] in residential and business neighborhoods. Covad is one of a new generation of competitive carriers that are intent upon the facilities-based deployment of DSL-based telecommunications services over unbundled loops to residential areas and business districts.

Covad's experience in *actually deploying* DSL services in a commercial setting in California and its efforts in the past year to expand its network to Petitioners' regions is highly relevant to this proceeding. Covad's network in the San Francisco Bay Area currently passes nearly 1,000,000 homes, businesses and schools, and Covad recently announced that it will expand its service offerings to five additional metropolitan markets in the next year. Contrary to Bell Atlantic's claims that CLECs ignore residential customers,[5] Covad's facilities-based, DSL network extends extensively to residential areas. Unless unreasonably hindered by incumbent LECs, Covad will be able to offer its innovative, "always-on" DSL services to over twenty percent of the homes and businesses in the United States by the end of 1999.[6]

Covad agrees with Petitioners that DSL technology is a tremendously cost-effective means of using existing local facilities to provide robust broadband services to

---

[4] Covad uses the term "DSL" to cover the range of variants of digital subscriber line technologies that enable the provision of different combinations of symmetric and asymmetric high-speed data and basic POTS ("plain old telephone service") telecommunications transmission services over copper loops. These variants include HDSL, VDSL, IDSL and RADSL technologies.

[5] BA Petition, Attachment 2 at 37-41.

[6] Although final bandwidth varies depending upon the quality and length of a particular subscriber's local loop, Covad can provide at least one level of DSL service to virtually every subscriber served by a central office in which Covad has a physical collocation arrangement.

residential neighborhoods. Since approximately 1994, ILECs have extensively deployed HDSL technology as a cost-reducting means for delivering T1 services. Ameritech now points out that the circuit-switched, voice telephone network is increasingly ill-suited to handle the growth of the Internet, the World Wide Web, and emerging high-bandwidth needs, such as telecommuting.[7] Packet-switched DSL networks (such as Covad's and the networks Petitioners apparently seek to construct) not only provide more reliable means of utilizing local facilities to provide broadband digital telecommunications services, they also will improve the reliability of existing voice-grade, circuit-switched local networks.

However, Covad differs strongly from Petitioners because Covad submits that a robust, competitive environment for broadband digital telecommunications services will best meet the exploding demand for these advanced telecommunications services. Consideration of competition is necessary because Section 706(a) deliberately states that "measures that promote competition in the local telecommunications market" is an appropriate method of ensuring that all Americans receive advanced telecommunications capability. In addition, Section 706(b) requires that the Commission "promot[e] competition in the telecommunications market" if it determines that advanced telecommunications capability is not being deployed to all Americans.[8] A dynamic, competitive environment leads to exponential growth in capacity and rapid development and deployment of "cutting-edge" technology by rival competitors.[9] This combination of fear and opportunity unleashes forces of "creative destruction" that has the potential to provide American consumers increasing bandwidth at diminishing, not increasing, prices.

---

[7] Ameritech Petition at 6-8.

[8] 47 U.S.C. § 157nt(a)-(b).

[9] Anyone who has bought a personal computer in the last few years and only to soon feel "buyer's remorse" over the latest generation in microprocessor speed and memory can attest to this fact.

Instead of this vision of robustly competitive markets for telecommunications bandwidth, Petitioners rely upon placid, static methods of economic analysis which virtually ignore the impact that a competitive market will have on innovation and deployment of new services.[10]

The Commission should not expect large, bureaucracy-laden firms that owe their market power in local circuit-switched services to six decades of affirmative governmental protection to immediately jump at opportunities to obsolete that equipment.[11] Thus, the Commission should not cajole or entice incumbent monopolies to deploy today's version of "high-technology." Nor should the Commission reward them for anti-competitive conduct towards CLECs who are making investments in the hope that someday the ILECs will comply with the law. Such steps would only solidify the entrenched monopoly nature of the incumbent LECs and would deny American consumers the exponential and ever-increasing bandwidth that the competitive process will bring both today and in the future.

---

[10] For example, Attachment B to the Ameritech Petition attempts to measure the impact of regulation on innovation since 1984. James Prieger, "The Effects of Regulation on the Innovation and Introduction of New Telecommunications Services," Attachment B to Ameritech Petition (March 2, 1998). In order to prove his hypothesis, Mr. Prieger's assumes that the number of services offered by incumbent carriers operates as a rough proxy for innovation in the entire market—in a sense, the more tariffs filed by the incumbent carrier, the better the innovative process is functioning. *Id.* at 26. Not surprisingly, Mr. Prieger found that under periods of relaxed regulation, the number of services offered by the RBOCs increased. However, counting "new" services offered by an incumbent—without examining whether these services are indeed different from already-existing services—could reflect an increased ability of the incumbent to engage in price discrimination. More importantly, this analysis does not account for two critical variables that also plausibly would cause an increase in "innovation" in these services during the relevant period—an increase in the number of competitive providers and the number of services offered by those competing providers. Models that do not address the possibility that increased competition (not regulatory changes) may have spurred the RBOCs to develop new services that are more responsive to customer needs are of little use.

[11] For example, in the 1960's, Paul Baran, one of the inventors of packet-switching technology, recently recalled AT&T's four-year long resistance to his proposals for a reliable, packet-switched digital communications network. Baran's recollection (as reported in a recent book) of his discussions with AT&T is eerily similar to the reaction that Covad has received from ILECs to date: "Their attitude was that they knew everything and nobody outside the Bell System knew anything .... The folks at AT&T headquarters always chose to believe their actions were in the best interest of the 'network', which was by their definition the same as what was best for the country." Katie Hafner and Matthew Lyon, *Where Wizards Stay Up Late: The Origins of the Internet*, 62-63 (1996).

II. PETITONERS' UNBUNDLING AND COLLOCATION PRACTICES HAVE HINDERED A COMPETITIVE MARKET FOR BROADBAND DIGITAL TELECOMMUNICATIONS SERVICES

Covad can build high-speed DSL networks throughout Petitioners' service territory if Petitioners would fully and faithfully implement the unbundling and collocation provisions of the Act.[12] Indeed, what stands in the way of the availability of DSL services "to all Americans" is not the 1996 Act, but the fact that the 1996 Act's provisions have not been fully or faithfully implemented by Petitioners and other incumbent LECs.

As a result, it is utterly disingenuous that some ILECs have requested regulatory "relief" while they maintain legal, economic and operational barriers to entry for the very same services they seek to have de-regulated. It is unfortunate that implementation of the 1996 Act are not anywhere close to uniform nationwide, and, indeed, in many areas, entirely absent altogether.

A. DSL-compatible local loops must actually be available on rates, terms and conditions that are just, reasonable and nondiscriminatory

Covad was founded shortly after the FCC's *First Local Competition Order*,[13] which mandated that ILECs unbundle loops conditioned to support DSL and other digital services.[14] Without that decision, Covad would not exist today.

The *First Local Competition Order* clearly decided that incumbent LECs were to provide CLECs with loops certified to support DSL signals. In particular, the

---

[12] 47 U.S.C. §251(c)(3), (c)(6).

[13] *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499, 15683-775 (1996) ("*First Local Competition Order*"), *aff'd in part and vacated in part sub nom. Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997), *aff'd in part and vacated in part sub nom. Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *cert. granted*, 66 U.S.L.W. 3484 (U.S. Jan. 26, 1998).

[14] Throughout these Comments, Covad uses the terms "DSL-compatible loop", "conditioned loops", "digital loop", and "loops certified to support DSL signals" interchangeably. The digital loop conditioning process is more fully discussed in Section II.A.1 below.

Commission decided that the definition of the loop element "includes . . . two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL and DS1-level signals."[15] The Commission also ruled that CLECs should not have to wait for incumbent LECs to deploy DSL service commercially before DSL-compatible loops be unbundled, stating that "section 251(c)(3) does not limit the types of telecommunications services that competitors may provide over unbundled elements to those offered by the incumbent LEC."[16]

Unfortunately, the actually availability of DSL-compatible loops on an unbundled basis from incumbent LECs—including some Petitioners—is uncertain at best. In addition, the rates, terms and conditions of these loops vary widely. For instance, the monthly charge for a digital loop in downtown Houston is nearly *ten* times more expensive than the monthly charge in downtown Chicago.[17]

1. FCC Rules Requiring that DSL-Compatible Loops be Unbundled has not been Implemented by all Incumbent LECs

In its experiences with several RBOCs, Covad has discovered (to its dismay) that incumbent LECs are routinely not making loops certified to support DSL services available to CLECs. Indeed, Bell Atlantic does not provide *any* CLEC with access to loops certified to support ADSL and HDSL services in *any* of its service territories,

---

[15] *First Local Competition Order* at ¶380. In making that decision, the Commission explicitly acknowledged that "the ability to offer various digital loop functions in competition with incumbent LECs" would be a viable entry strategy for CLECs. *Id.*

[16] *Id.* at ¶ 381. Covad will not detail DSL-loop OSS requirements in these comments, but notes that it is not being provided or offered on-line access to ILEC outside plant databases or design lay out records.

[17] The recurring price for an unbundled, ADSL-compatible loop in Chicago is $3.72 per month. Compare that rate to Texas, where the monthly price for a loop certified to carry digital traffic in Houston is $34.91. In rural areas of Illinois, the price for an ADSL-compatible loop is $11.53, compared to $46.09 in rural areas of Texas. *See AT&T Communications of Illinois, Inc. Petition for Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with Illinois Bell Telephone Company d/b/a/ Ameritech Illinois*, Docket No. 96-AB-003; *Ameritech Illinois Petition for Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with AT&T Communications of Illinois*, Inc. Docket No. 96-AB-004 (Ill. Comm. Cmsn. Nov. 26, 1996) ("Ameritech/AT&T Illinois Agreement"); *Petition of MFS Communications Company, Inc. for Arbitration of Unbundled Loops*, Docket Nos. 16189,

despite the FCC's clear decision on this subject.[18] Bell Atlantic's failure to provide these loops should be singularly fatal to its Petition.

To illustrate the breadth and gall of Bell Atlantic's efforts to deny CLECs access to DSL-compatible loops, Attachment A contains relevant provisions of what Covad believes to be all Interconnection Agreements between Bell Atlantic/NYNEX and facilities-based CLECs in Massachusetts. The comprehensiveness of BA/NYNEX's efforts to thwart DSL competition shown in Attachment A is impressive—by religiously inserting these clauses into every Agreement, Bell Atlantic has denied the citizens of Massachusetts the dynamics of a fully-competitive market for advanced, high-speed DSL services.[19]

Bell Atlantic's efforts are not limited to Massachusetts, as similar clauses uniquely permeate Bell Atlantic's negotiated and arbitrated Interconnection Agreements in other states, including New York, Virginia and Maryland. To add insult to injury, Attachment A reveals that since mid-1996, Bell Atlantic/NYNEX has promised Massachusetts CLECs the results of a trial of ADSL technology that "is due to be completed by the end of the first quarter of 1997." To Covad's knowledge, such disclosure has not happened. Although time has made the 1Q 1997 deadline obsolete, Bell Atlantic continues to sign agreements containing a promise to share the results of the "first quarter of 1997" trial even today.

16196, 16226, 16285, 16290, 16455, 17065, 17579, 17587, 17781, Arbitration Award (Tex. Public Utility Cmsn., Dec. 17, 1997).

[18] Therefore, while Bell Atlantic touts its "excellent record of investing aggressively in new telecom technologies and infrastructure" and chastises the focus on business markets of CLECs, precious few resources appear to have been devoted to unbundling DSL-compatible local loops—a network element that, if available, would accelerate deployment of DSL technologies by CLECs to residential areas. BA Petition, Attachment 2 at p. 43.

[19] Given the fact that DSL-compatible loops are indeed not available in Bell Atlantic's service territory on an unbundled basis, the Commission should strike from its consideration of this Petition any argument that Bell Atlantic makes that depends upon the availability of such loops. The Commission should require Bell

Another facet of this comic tragedy is that Bell Atlantic has taken the position documented in Attachment A at the same time that it has extensively deployed HDSL technology to provide T1 services.[20] Meanwhile, Bell Atlantic's public position is that it is still engaging in an ADSL trial in Boston, Northern Virginia, Ithaca and Pittsburgh.[21]

Covad has invested a great deal of legal and intellectual capital trying to break the DSL-loop logjam that Bell Atlantic has created, and Covad's agreement with Bell Atlantic in New York State is one of the few agreements that permits it to provide DSL services and establishes a process in which DSL-compatible loops may eventually be provided by Bell Atlantic.[22] However, Covad has experienced difficulty in extending that agreement to the rest of BA's region, including Massachusetts. Needless to say, the Commission should not even consider granting Bell Atlantic regulatory relief with respect to its DSL services before Bell Atlantic actually provides CLECs with unbundled loops certified to support DSL services as required by FCC Rules.

Covad's experience with Ameritech stands in marked contrast to its experience with Bell Atlantic. In Illinois, Ameritech interconnection agreements clearly state that

---

Atlantic to state in detail how CLECs in Bell Atlantic's region can today engage in the DSL entry strategy Bell Atlantic describes on pages 4 and 21.

[20] On October 6, 1997, Bell Atlantic, after facing a motion to compel, admitted to Covad in discovery that it had deployed 17,432 T1 lines in New York State that use HDSL technology. Letter from Maureen Thompson, Counsel, Bell Atlantic, to Dhruv Khanna, General Counsel, Covad, Case 97-C-1419 (Oct. 6, 1997). Bell Atlantic's admission came only one month after it had opposed Covad's discovery request, telling the New York Commission that Bell Atlantic "does not currently provision to itself or offer ADSL- or HDSL-compatible links . . . ." Letter from Maureen Thompson, Counsel, Bell Atlantic, to Hon. Jaclyn A. Brilling, Administrative Law Judge, New York Department of Public Service, Case 97-C-1419 at 5 (Sept. 16, 1997).

[21] *See* Bell Atlantic Media Relations, "ADSL/Broadband" Public Policy Paper, found at www.ba.com/policy/positions/1998/Feb/19980219002.html.

[22] Covad's New York Agreement permits Covad to provide DSL service on the Effective Date of the Agreement but also requires Covad to engage in a "technical and operational trial" with Bell Atlantic before Bell Atlantic will provide loops certified to support DSL services. Interconnection Agreement between New York Telephone Company, d/b/a Bell Atlantic and Covad Communications Company (NYPSC filed Dec. 19, 1997), Part II, Section 2.9.1. The fact that Covad, a company with less than one hundred employees, would agree to a trial with Bell Atlantic, a multi-billion dollar firm, demonstrates Covad's commitment to the reliability of DSL technology and its goal of building high-speed broadband networks in Bell Atlantic's service territory.

loops certified to support ADSL and HDSL services will be provided to CLECs. In addition, the cost of loops conditioned for those digital services is identical to the cost of loops conditioned for analog, voice-grade services.[23] Although Covad has not had any direct experience in service order processing and provisioning with Ameritech, at least Ameritech is willing to commit in its Interconnection Agreements to provide these loops.

2. *Rates for Loops Certified to Support DSL Signals Should Be Substantially Similar to Rates for Loops Certified to Support Analog Signals*

The wide variety of digital loop prices, and oftentimes great price differentials between analog and digital loops in the same state, present significant barriers to DSL deployment by CLECs. Attachment B contains a sample of monthly analog and digital loop rates in various states of Petitioners and other incumbent LECs.

Covad firmly believes that the cost of providing loops certified to support DSL services is substantially similar to the cost in providing loops certified to support analog, voice-grade services. Indeed, incumbent LECs told the Commission prior to passage of the Act that the cost of loops certified to support BRI-ISDN services is not markedly different than the cost of loops certified to support analog services.[24]

With regard to the outside plant itself, many "plain copper" loops do not require any special work at all to be certified to support DSL services. However, on some longer loops, incumbent LECs have placed analog load coils in order to qualify those loops for analog, voice-grade services. Since these coils preclude the transmission of digital signals over that loop, a loop certified to support DSL services must be free of such

---

[23] *See* Ameritech/AT&T Illinois Agreement.

[24] *See Access Charge Reform*, First Report and Order, 12 FCC Rcd 15982, 16028-32 (1997) ("*Access Charge Order*") (comparing costs of standard analog loops and loops which have been conditioned for Basic Rate Integrated Service Digital Network ("ISDN") service). Indeed, NYNEX submitted data

encumbering equipment. However, requiring purchasers of digital loops to pay for the removal of equipment that was placed on the loops to support analog transmissions is counter to sound forward-looking and reasonable cost-causation principles. Moreover, analog and digital conditioning activities performed by ILEC outside plant personnel appear as a part of overall outside plant maintenance costs that are not separately identifiable or state in ILEC cost studies. In the case of loops that are a combination of copper drops and fiber or coax feeder (which utilize Integrated Digital Loop Carrier systems or other remote-terminal equipment), the cost difference between a loop certified to provide analog service and a loop certified to provide digital service is generally the cost difference in necessary fiber/coax capacity and the particular type of line card that is placed at the remote terminal interface between the copper and the fiber or coax.[25]

As a result, the monthly prices of unbundled loops certified to support DSL services should not differ markedly from the monthly prices of unbundled loops certified to support analog, voice-grade services. Unfortunately, the UNE prices that have emerged from the Section 252 process vary widely. As demonstrated in Attachment B, in Illinois, the monthly prices for Ameritech ADSL and HDSL loops are identical to the monthly prices for analog loops. The same is not true in the service territories of the other ILECs, such as Bell Atlantic. And not even the differences in weather, geology, the cost of labor, and other cost factors cannot explain the radical price differences between Illinois and Texas.

---

showing that loops certified for digital traffic actually cost *less* than analog-certified loops because they can be tested and maintained remotely. *See id.* at 16197-99.

[25] "BRITE" cards that support digital, ISDN signals have been deployed by incumbent LECs for years. Similar cards for DSL services are currently under development by several DSL-equipment vendors.

3. *The Commission Must Ensure that these DSL-Compatible Loop Issues are Resolved Before Considering these Petitions*

All three Petitioners acknowledge that the availability of digitally-conditioned unbundled loops to CLECs is important to the competitive process, and indeed all three argue (either explicitly or implicitly) that since such loops capable of supporting DSL services are available under Section 251(c)(3), regulatory relief is warranted.[26]

Given that the availability of DSL-compatible loops is central to Petitioners' arguments, the least the Commission must do is investigate whether such loops are actually being made available and provided by Petitioners. In addition, under Section 706 and otherwise, the Commission should make it clear that the just, reasonable and nondiscriminatory provisions of Section 251(c)(3) require that the rates for a loop engineered to provide digital services be substantially similar to the cost of a loop engineered to provide analog services.

B. Petitioners and Other ILECS Must Be Required to Reform their Physical Collocation Practices

CLECs such as Covad must physically collocate their equipment in incumbent LEC central offices in order to provide DSL-based telecommunications services on a fully-competitive basis. As a result, the goals of Section 706 of the 1996 Act will be served if the Commission takes specific steps to ensure that physical collocation space for CLEC DSL equipment is readily available in *all* neighborhoods at parity with the ILEC's placement of its own equipment.

These goals can only be realized if ILECs are required to reform their medieval, cage-based physical collocation practices in a manner that would provide CLECs with

[26] U S WEST Petition at 4-5; Ameritech Petition at 18; BA Petition at 4, 21 ("any competing local exchange carrier can arrange to attach [DSL equipment] to the loops . . . that are available for rental as unbundled elements", "competitors can independently acquire and attach" DSL electronics).

more cost-effective and rapid collocation solutions. The cost of traditional, cage-based collocation—which includes the cost of a cage and related infrastructure improvements that is inflected on the first CLEC that collocates—is generally unnecessary and wasteful and also creates an artificial scarcity of central office space.[27] Covad has generally found that in as many as 15-20% of the central offices it seeks to collocate in—even and especially among residential offices in which Covad would be the *first* collocator—ILECs claim that no space is available for physical collocation.[28]

These "no-space" assertions create competitive barriers because ILECs do not face the same exclusion from the central office when they place DSL equipment, cage-free, in those very same central offices. For example, although Covad's collocation applications have been denied in some Bay Area offices, Pacific Bell has since begun to provide DSL services from those offices—indicating that there is indeed space for DSL central office equipment.

Since Covad's business plan involves offering "blanket" services to entire metropolitan areas for its telecommuter and ISP services, Covad immediately felt the unnecessary burden of the ILECs' medieval cage-based collocation practices. However, nationwide demand for collocation has increased dramatically since passage of the 1996 Act, and the Eighth Circuit's decision to require CLECs to "combine" unbundled network elements can be expected to increase collocation demand even further. As a result, current ILEC physical collocation practices are denying entirely a significant portion of American consumers the benefits of facilities-based, DSL-loop competitors.

---

[27] In the *First Local Competition Report and Order*, the Commission "recognize[d] that the construction costs of physical security arrangements could serve as a significant barrier to entry" and that ILECs have "an incentive and the capability to impose higher construction costs than the new entrant might need to incur." *First Local Competition Report and Order* at ¶ 598.

As a result, Covad has, with varying success, explored other alternative forms of physical collocation with Petitioners and other ILECs, including "cage-less" physical collocation. "Cage-less" physical collocation would permit CLECs to collocate DSL equipment in the ILEC central office in the same manner that the ILEC places its own DSL equipment in the office, subject to reasonable security arrangements such as video cameras. Covad believes that only cage-less physical collocation provides CLECs with true parity to the manner in which the ILEC places equipment in central offices.

Based on its experience, Covad believes that cage-less physical collocation can be carried out by an ILEC in forty-five days and for non-recurring charges of less than $10,000 per office. Compared to more than one hundred days and $100,000 or more for cage-based collocation, it is easy to see that cage-less physical collocation will prompt collocation by Covad and other CLECs in residential neighborhoods with far smaller populations that would be too expensive to serve under cage-based physical collocation.

Section 251(c)(6) of the Act does not mandate any one form of physical collocation. In the *First Local Competition Report and Order*, the Commission ruled that "[a] variety of terms and conditions for physical collocation are possible" under section 251(c)(6).[29] Indeed, cage-less arrangements are common between CLECs today when they collocate equipment on each other's premises. Despite ILEC claims to the contrary, the Commission's Rules do not require that cages surround collocated CLEC equipment in central offices. The Commission's rules permit the ILECs only to impose reasonable security arrangements, and the current practices of most ILECs to require cages is

[28] In the *First Local Competition Report and Order*, the Commission stated that "incumbent LECs have the incentive and capability to impede competitive entry by minimizing the amount of space that is available for collocation by competitors." *First Local Competition Report and Order* at ¶ 585.
[29] *First Local Competition Report and Order* at ¶ 568.

undoubtedly unreasonable.[30] Covad firmly believes that security issues can be resolved through normal, reasonable commercial arrangements (such as insurance requirements) that are similar to the way in which ILECs maintain central office security when third-party vendors work in those offices. Finally, modern security technology—such as video camera systems similar to those used at bank ATMs—can also provide cost-effective security. In other cases, very simple, low-tech arrangements—such as changing locks—are sufficient.[31]

Petitioners have the ability to reform immediately their archaic collocation practices in a manner that would permit the competitive provision of advanced telecommunications services. By making collocation more economical and eliminating the crippling handicaps associated with limiting CLECs to build Swiss-cheese networks, cage-less physical collocation will spur the rapid build-out of high-speed, facilities-based broadband networks to residential areas.

C. The Commission Should Remove Artificial Restrictions Placed Upon Collocated Equipment

In considering these Petitions and in the context of Section 706 generally, the Commission should remove its restriction upon collocation of switching equipment. In addition, the Commission should require that Petitioners and other ILECs permit CLECs to collocate and fully-utilize any piece of telecommunications equipment that meets relevant NEBS safety standards. Artificial restrictions on collocated equipment force

---

[30] The Commission only stated in the *First Local Competition Order* that ILECs could "require reasonable security arrangements to separate an entrant's collocation space from the incumbent LEC's facilities," and the Commission stated that a "collocation cage adequately addresses these concerns." *First Local Competition Order* at ¶ 598. However, other forms of security arrangements—such as security cameras—clearly may also be adequate to address ILEC security concerns.

[31] For example, in one Pacific Bell office, one entire floor—a space as large as a basketball court—is virtually empty of telecommunications equipment, with the lone exception of two CLEC collocation cages tucked away in one corner. In this instance, a reasonable security measure would have been to change locks and give CLECs keys only for that floor. Requiring CLECs to pay tens of thousands of dollars for the construction of a cage in that and similar circumstances is clearly unreasonable.

CLECs into time-consuming delay and litigation and also forbid more-efficient forms of network design. A clear, national principle is needed to prevent these delays and inefficiencies.[32]

In particular, the Commission's current rules have permitted ILECs to drag CLECs into state-by-state, case-by-case determinations as to whether a particular piece of equipment may be collocated in an ILEC central office.[33] As a result, ILECs are able to add to the collocation process another time-consuming step that causes CLECs even further delay in constructing their network.

The Commission's wholesale restriction on collocation of switching equipment should be re-visited in the Section 706 context at least to make clear that it does not apply to packet-switching equipment. Deployment of packet-switching equipment in ILEC central offices—without concern that the ILEC will drag it through case-by-case determinations of the "functionality" of such equipment—would permit Covad and other CLECs building all-digital, data-oriented networks to freely utilize customized routing and other sophisticated functions that can make their networks more redundant, reliable and efficient.

The Commission should rule that all telecommunications equipment that a CLEC certifies meets relevant NEBS safety standards (*i.e.*, has been certified by BellCore as being compliant or is in the sometimes-lengthy process of being certified) and that is used and useful for interconnection and access to unbundled network elements may be

---

[32] In the *First Local Competition Order*, the Commission stated that it "reserve[s] the right to reexamine this issue at a later date if it appears that such action would further achievement of the 1996 Act's procompetitive goals." *First Local Competition Order* at ¶ 581.

[33] Section 51.323(b) of the Commission's Rules requires that ILECs permit collocation of "any type of equipment used for interconnection or access to unbundled network elements." 47 C.F.R. § 51.323(b). The Rules also state that in the event an ILEC "objects" to collocation of a particular type of equipment, the ILEC is given license to prove to the relevant state commission "that the equipment will not be actually used by the telecommunications carrier for the purpose of obtaining interconnection or access to unbundled

collocated in ILEC central offices and used to the full extent of their capabilities, including packet-switching functions.

II. CONCLUSION

Section 706(a) makes it clear the Commission should consider "measures that promote competition in the local telecommunications market" in order to encourage the deployment of advanced telecommunications capabilities to all Americans.[34] Commission implementation of the steps described above—in particular, (1) ensure that DSL-compatible loops are available on just and reasonable rates, terms and conditions, (2) require reform of ILEC collocation practices, and (3) remove artificial restrictions on collocated equipment—would, Covad believes, help bring the competitive provision of broadband digital telecommunications services to residential markets throughout the country. Unfortunately, implementation of these steps is not uniform nationwide, hampering full realization of Section 706's goals.

Responsibility for the seemingly-stalled deployment of advanced telecommunications services must be placed squarely on the ILECs alone. Delay can be attributed to the absence of a fully-competitive market—created by certain actions of the Petitioners and other ILECs. The goal of the Telecommunications Act of 1996 and Section 706 is to promote the deployment of these services to all Americans in a *competitive* environment, and Covad believes that American consumers deserve no less than the most robustly competitive and rivalrous "market for telecommunications

---

network elements." *Id.* Section 51.323(c) states that ILECs are not required "to permit collocation of switching equipment or equipment used to provide enhanced services." 47 C.F.R. § 51.323(c).

[34] 47 U.S.C. §157nt(a). In addition, in the upcoming inquiry required by Section 706(b), the Commission is required to accelerate such deployment "by promoting competition in the telecommunications market." 47 U.S.C. § 157nt(b).

bandwidth" in the world. Blatant barriers to entry, including those willfully erected by Petitioners, must not be allowed to stand.

American consumers deserve more than the lackadaisical service and "take it or leave it" ISDN tariffs that are the legacy of a monopoly environment. Granting these Petitions absent a competitive environment would condemn the deployment of these crucial next-generation services to the unfettered whims of the ILECs—precisely the opposite of what Congress intended Section Sections 251, 271 and 706 to accomplish.

Respectfully submitted,

Thomas M. Koutsky
Assistant General Counsel
Covad Communications Company
3560 Bassett Street
Santa Clara, CA 95054
VA tel (preferred): (703) 765-4127
Cal tel: (408) 490-4500

April 6, 1998

ATTACHMENT A

MASSACHUSETTS INTERCONNECTION AGREEMENTS BETWEEN FACILITIES-BASED CLECs AND NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, d/b/a NYNEX OR BELL ATLANTIC

ADSL/HDSL Loop Clause	Interconnection Agreements
"The Parties acknowledge that ADSL is not currently deployed for use in the [BA/NYNEX] network. [BA/NYNEX] is conducting a technical trial that is due to be completed by the end of the first quarter of 1997 testing ADSL technology. [BA/NYNEX] will share its interim findings and conclusion and consult with [CLEC] regarding the issues related to deploying ADSL in [BA's/NYNEX's] network. If the issues surrounding deployment of ADSL in [BA's/NYNEX's] network are satisfactorily resolved and ADSL is deployed, [BA/NYNEX] shall allow [CLEC] to access ADSL Links unbundled from local switching and local transport in accordance with the terms and conditions set forth in this Section 9.0."	MFS (Section 9.2, 7/10/96) C-TEC (Section 9.2.1, 10/15/96) WinStar (Section 9.2, 11/8/96) XCOM (Section 9.2, 4/22/97) US ONE (Section 9.2.1, 3/6/97) Intermedia (Section 9.2.1, 3/11/97) GNAPS (Section 9.2.1, 4/18/97) Brooks Fiber (Section 9.2.1, 6/24/97) RNK, Inc. (Section 9.2, 3/25/97)
"The parties acknowledge that ADSL is not currently deployed for use in the NYNEX network. NYNEX is conducting a technical trial to test ADSL technology. NYNEX will share its interim findings and conclusion and consult with ANTC regarding the issues related to deploying ADSL in NYNEX's network. If the issues surrounding deployment of ADSL in NYNEX's network are satisfactorily resolved and ADSL is deployed, NYNEX shall allow ANTC to access ADSL Links unbundled from local switching and local transport in accordance with the terms and conditions set forth in this Section 15.0."	ACC National Telecom (Section 15.2.1, 8/20/97)
"The Parties acknowledge that ADSL is not currently deployed for use in the [BA/NYNEX] network. If the issues surrounding deployment of ADSL in [BA/NYNEX's] network are satisfactorily resolved and ADSL is deployed, [BA/NYNEX] shall allow [CLEC] to access ADSL Links unbundled from local switching and local transport in accordance with the terms and conditions set forth in this Section 9.0."	Continental (Section 9.2.1, 7/18/97) COMAV Telco (Section 9.2.1, 7/25/97) US WEST !ntermedia (Section 9.2, 9/19/97) Frontier (Section 9.2.1, 9/19/97) Teleport (Section 9.2, 2/17/98)
"The Parties acknowledge that ADSL is not currently commercially deployed for use in the BA network. If the issues surrounding deployment of ADSL in BA's network are satisfactorily resolved and ADSL is deployed, BA shall allow [CLEC] to access ADSL Links unbundled from local switching and local transport in accordance with the terms and conditions set forth in this Section 9.0."	NorthPoint (Section 9.2, 3/25/98)
"BA will make HDSL 4-wire, HDSL 2-wire, and ADSL 2-wire ULL [unbundled local loops] available to [CLEC] no later than the date on which it makes such ULLs commercially available to any other Telecommunications Carrier in [RELEVANT STATE]. The Parties shall amend Exhibit A to add the appropriate rates and charges."	BA "Model" Contract (proposed to Covad, 12/11/97)

ATTACHMENT B

MONTHLY UNBUNDLED ANALOG AND DIGITAL LOOP RATES

State	2-Wire Analog Loop	2-Wire Digital (ADSL, HDSL or ISDN) Loop	Source
Illinois	Zone A: $3.72 Zone B: $10.02 Zone C: $11.53	Zone A: $3.72 Zone B: $10.02 Zone C: $11.53	Ameritech/AT&T Interconnection Agreement
Oregon	$16.00	ISDN: $16.00	U S WEST/GST Interconnection Agreement
Virginia	Zone 1: $9.52 Zone 2: $13.31 Zone 3: $19.54	ISDN: Zone 1: $19.87 Zone 2: $24.47 Zone 3: $41.26 ADSL/HDSL: TBD	Bell Atlantic/AT&T Interconnection Agreement
Massachusetts	Metro: $7.54 Urban: $14.11 Suburban: $18.12 Rural: $20.04	Metro: $19.87 Urban: $27.24 Suburban: $29.38 Rural: $32.84	Bell Atlantic tariff filed in compliance with Consolidated Arbitration Order
Texas	Zone 1: $18.98 Zone 2: $13.65 Zone 3: $12.14	Zone 1: $46.09 Zone 2: $37.54 Zone 3: $34.91	Consolidated Arbitration Permanent Rates Order

Certificate of Service

I, Suzanne M. Takata, hereby certify that true and correct copies of the preceding Comments filed on behalf of Covad Communications Company in CC Docket Numbers 98-11, 98-26, and 98-32 were served this 6th day of April, 1998, upon the following parties via hand delivery:

Suzanne M. Takata

Janice M. Myles
Common Carrier Bureau
Federal Communications Commission
Room 544
1919 M Street, NW
Washington, DC 20554

ITS
1919 M Street
2nd Floor
1919 M Street, NW.
Washington, DC 20554